AMENDMENTS TO THE DRAWINGS

Please substitute the attached seven (7) sheets of replacement drawings for the originally filed drawings in this application.

REMARKS/ARGUMENTS

Claims 1-4, 6-17, 19-29, 31-37 and 39-42 stand rejected in the outstanding Official Action. Applicants have amended claims 1, 7, 9, 14, 20, 22, 27, 32, 34, 35, 41 and 42 and therefore claims 1-4, 6-17, 19-29, 31-37 and 39-42 remain in this application.

In sections 3 and 4 on page 2 of the outstanding Official Action, the Examiner confirms that claims 1, 14, 27 and 35 have previously been amended and that claims 5, 18, 30 and 38 have been cancelled. Inasmuch as these actions were set out in the Rule 116 Amendment filed February 28, 2008, Applicants takes the outstanding Official Action as confirming that the Amendment Under Rule 116 has been entered and that the Examiner has withdrawn the previous finality of this action. It is noted that the current Official Action represents a the 4th and non-final Official Action in this application.

In section 5 of the outstanding Official Action, the drawings are objected to in the present case. Applicants have submitted seven new sheets of replacement drawings and entry of these replacement drawings is believed to be appropriate, as they completely respond to any further allegation that the drawings are defective.

In section 6 on page 3 of the Official Action, the abstract is objected to as exceeding the PTO requirement in terms of length and contains a reference to "Figure 4B." The substitute abstract submitted herewith meets the 150-word length limit and the reference to Figure 4B has been deleted. Accordingly, entry of the substitute abstract is believed to obviate any further objections to the abstract.

Claims 1-4, 6-17, 19-26 and 32 are objected to because of alleged informalities. The Examiner suggests that the claim 1 recitation of "said sequence of generated instructions" does not have proper antecedent basis. This contention by the Examiner is respectfully traversed.

Claims 1 and 14 specify at line 4 "a corresponding sequence of generated instructions" and it is noted that this phrase in each claim provides literal antecedent basis for the term "instructions," the phrase "generated instructions," the phrase "sequence of generated instructions" and the phrase "a corresponding sequence of generated instructions" as long as there are no other "instructions" specified or "generated instructions" specified or "sequence of generated instructions" specified. A review of Applicants' claim 1 shows there to be no other "sequence of generated instructions" other than the sequence introduced at line 4 and therefore the subsequent reference to "said sequence of generated instructions" has explicit literal antecedent basis in claim 1, as well as claim 14 and any further objection is respectfully traversed.

Claims 1 and 14 are objected to, with the Examiner again contending that there is no explicit antecedent basis for "the condition code." In this instance, the Examiner has a legitimate argument in that claim 1 and claim 14 recite "a condition code" and "a corresponding condition code" both of which are recited in paragraph a). Applicants have amended paragraph c) to reference "the corresponding condition code" thereby obviating any further objection to claims 1 and 14 in this regard.

On page 4 of the Official Action, claims 7, 20 and 32 have been objected to as not reciting instruction groups in plural. Applicants have amended each of these claims to positively recite "said instruction groups" thereby obviating any further objection.

Claims 14-17, 19-29, 31-37 and 39-42 stand rejected under 35 USC §112 (first paragraph) as purportedly being based upon a non-enabling disclosure. There is no objection to claim 1, presumably because Applicants' section b) in that claim specifies "executing, on a target processor, said sequence of generated instructions and thereby producing software test information." Applicants have amended independent claims 14 and 35 by positively reciting the production of software test information, thereby obviating any further objection thereto.

However, with respect to claim 27, Applicants believe it inappropriate to specify the step of generating software test information because the claim itself is a method of generating software test instructions. The claim literally specifies the steps of how those software test instructions are generated, i.e., "generating, from a sequence of instructions, at least one of which includes a condition code, a corresponding sequence of generated instructions, for selected instructions having a condition code . . . ." Thus, the method by which "software test instructions" are generated is set out in the steps of the claim. Accordingly, claim 27 as it currently exists is believed to be correct and reconsideration of the §112 (first paragraph) rejection of this claim and claims dependent thereon is respectfully traversed.

In section 11 on page 5 of the Official Action, claims 1-4, 6-17, 19-29, 31-37 and 39-42 stand rejected under 35 USC §112 (second paragraph) as being indefinite. With respect to independent claims 1, 14 and 27, the Examiner suggests that the inclusion of a "wherein" clause will obviate this objection. Applicants have made this amendment in claims 1, 14 and 27 and therefore any further rejection thereunder is respectfully traversed.

Claims 1, 14 and 27 are objected to as lacking antecedent basis for "the corresponding generated instruction." Applicants have amended claims 1, 14 and 27 to recite "a corresponding generated instruction" thereby obviating any need for antecedent basis.

Claims 1, 14 and 35 are rejected as lacking antecedent basis for the phrase "the operation." As suggested by the Examiner, each of these claims has been amended to recite "an operation" thereby obviating any need for antecedent basis.

Claims 9, 22 and 34 stand rejected as lacking antecedent basis, with the Examiner suggesting that the phrase "that instruction group" should be read "an instruction group." Actually, Applicants have reviewed the claims and believe that any indefiniteness can be corrected by the amended wording of "relating to the number of instructions in a corresponding instruction group of said number of instruction groups." Antecedent basis for "instruction groups" is in claim 7. Accordingly, claims 9, 22 and 34 have been amended in a manner which is believed to obviate any further rejection.

Claim 41 is rejected, with the Examiner suggesting that the phrase "said sequence of generated instructions" has insufficient antecedent basis. The Examiner's attention is directed to claim 35 which, at lines 4 and 5, provides clear antecedent basis for "a sequence of generated instructions." Since claim 41 depends from claim 40 which in turn depends directly from claim 35 there would appear to be proper antecedent basis. Therefore, it is submitted that there is literal antecedent basis for "said sequence of generated instructions" in claim 41 and no further amendment is needed.

In the last paragraph of section 11, the Examiner objects to claims 41 and 42 as improperly referring to "said step c)" when in fact there is no antecedent basis for a step c) in

claim 35 from which claims 41 and 42 depend. Claims 41 and 42 have been amended as suggested by the Examiner to reference "said step b)."

Claims 14-17, 19-29, 31-37 and 39-42 stand rejected under 35 USC §112 (second paragraph) as purportedly omitting essential steps. While under a different paragraph of §112, this rejection is believed to be similar to the rejection set out in section 9 of the Official Action. Similarly, the amendments to the independent claims are believed to overcome this objection, as the claim clearly specifies the generating of software test information as required. Accordingly, any further rejection of claims 14-17, 19-29, 31-37 and 39-42 under 35 USC §112 (second paragraph) is respectfully traversed.

Claims 1-4, 6, 10-17, 19, 23-29, 31, 35-37 and 39-42 now stand rejected under 35 USC §102 as being anticipated by Applicants' Admitted Prior Art or "AAPA" as discussed in section 14 on page 8 of the Official Action. Applicants believe this to be incorrect, as the present specification includes a detailed disclosure of the AAPA and from this detailed disclosure it should be apparent that all claimed structures are simply not disclosed in the admitted prior art.

For example, in independent claim 1, there is a requirement in section a) "for selected instructions having a condition code wherein a corresponding generated instruction is a predetermined generated instruction having a corresponding condition code." Similarly, in section c) of claim 1, there is the requirement of "determining with reference to status information associated with an operation of said target processor whether the corresponding condition code of said predetermined generated instruction is satisfied." None of the above underlined portions of claim 1 (and corresponding portions in the other independent claims) are disclosed in the AAPA.

The differences between all of the AAPA systems (disclosed in Figures 1-3 of the present application) and the claimed invention is summarized in the specification on page 8, lines 19-31, and is reproduced below:

> The inventors of the present invention recognised that in the prior art approaches, the time taken when having to check whether a condition code is satisfied can be significant. The reason that this time is significant is that the original instruction needs to be referred to, as does the status of the target processor, in order to determine whether the condition code is satisfied. This determination is performed by a handler routine which because this is implemented using software increases the time taken. Hence, in the present invention, when the sequence of generated instruction is produced, a condition code is provided for each generated instruction, where appropriate. Providing a condition code with the generated instruction reduces the time taken to determine whether that condition code is satisfied. This is because it is possible to make the determination using the generated instruction without having to invoke a software handler routine to perform the additional steps of referring to the original instruction as required in the prior art approaches.

The above can be understood by comparison with the generated opcode instructions of the prior art arrangements in Figures 1 and 3 which are special instructions SPI having no corresponding condition code, whereas in the embodiment of Figure 4A of the present invention, the special instructions SPI do have condition codes corresponding to the condition code of the corresponding original instruction.

As a result, in the prior art systems, the time taken to check whether or not a condition code is satisfied can be significant due to the fact that the original instruction needs to be referred to along with the status of the target processor in order to determine whether the condition code is satisfied. This is as a result of the fact that the special instructions of the prior art systems do not have the corresponding condition codes which means that the original instructions have to be

referred to. Accordingly, even in cases where the condition code will not in fact be satisfied, a handler routine has to be invoked in order to perform the condition code check.

In contrast to the prior art systems, in the present invention, the sequence of generated instructions have corresponding condition codes and those corresponding condition codes can be used to perform the check of whether the condition code has been satisfied without having to refer back to the original instructions and the original associated condition codes. Providing a corresponding condition code with the generated instruction reduces the time to determine whether that condition code is satisfied because it avoids the need to invoke a software handler routine to perform the additional steps of referring back to the original instructions as required by the AAPA approaches illustrated in Figures 1-3.

As clearly disclosed in Applicants' specification on page 15, lines 10-15,

> This should be contrasted with the prior art approach of Figure 3 where, as mentioned above, in order to determine whether the condition code is valid, the special instruction had to be identified; then the operation of the processor core 20 suspended whilst a handler routine was invoked; then the corresponding original instruction identified, together with its condition code; and only then could the condition code be checked against the architectural state of the processor core 20.

From the above, it should be clear that the present specification clearly points out the distinguishing features between the independent claims and the AAPA.

Turning to the details of the rejection under section 14 of the Official Action (pages 8 and 9 of the Official Action), the Examiner cites Applicants' specification, page 1, lines 22-28, as purportedly teaching the portion of claim 1 which requires the "corresponding generated instruction is a predetermined generated instruction having a corresponding condition code."

An examination of Applicants' specification at page 1, lines 22-28, does not indicate any disclosure of a "predetermined generated instruction having a corresponding condition code" and, in fact, merely discloses that in the AAPA, a previously known instruction set emulator produces generated opcode and the analysis module substitutes a special instruction for each instruction in the original opcode. There is no indication that a condition code is associated with the original opcode. The Examiner also references the specification pages 2, 3 and 4, but apparently fails to appreciate that the condition codes which are referenced in the specification are all condition codes associated with the **original** opcodes and not the **generated** opcodes (it is noted that claim 1 specifies a predetermined generated instruction).

Additionally, with respect to step c) in claim 1, the Examiner alleges that page 6, lines 14-25 of the specification somehow supports an anticipation rejection. However, in view of the above, it should be clear that this is a discussion of AAPA Figure 3 and its operation. This portion of the specification's discussion of the prior art clearly teaches away from the feature of the claimed invention.

In fact, line 18 of the specification states, and it is quoted in the outstanding Official Action (at page 9 beginning at line 16), "once activated, the handler routine 30 refers to the original opcode 14 and checks the condition code of the corresponding original instruction." This language very clearly specifies exactly what is done in all of the prior art, i.e., the computer has to go back and check to see whether or not a condition code is satisfied and **clearly leads one away from the present invention** in which there is provided a corresponding condition code with the generated instruction which clearly reduces the time to determine whether that condition code is satisfied because it avoids the need to invoke a software handler routine to go

back and check the original instruction. Thus, the Examiner's own quotation illustrates that, not only does the AAPA fail to anticipate Applicants' independent claims or claims dependent thereon, it actually teaches away from the claimed invention by suggesting that "once activated, the handler routine 30 **refers to the original opcode 14 and checks the condition code of the corresponding original instruction**."

Because the burden is on the Examiner to establish how or where the AAPA contains a disclosure of each and every element or method step of Applicants' independent claims, and in addition, how each and every element/method step is interrelated, in order to support an anticipation rejection, there is simply no *prima facie* basis for rejection of any of the independent claims under the AAPA as suggested by the Examiner.

Claims 7-9, 20-22 and 32-34 stand rejected under 35 USC §103 as unpatentable over AAPA in view of Schepers (U.S. Patent 5,712,996). The above comments with respect to the independent claims being patentable over AAPA are herein incorporated by reference inasmuch as claims 7-9, 20-22 and 32-34 all depend from independent claims. Moreover, because AAPA clearly leads one of ordinary skill in the art to do the opposite of what is required in the independent claims, rebuts any *prima facie* case of obviousness. Therefore, the Examiner has failed to set out a *prima facie* case of obviousness (by showing where each claim element or method step is disclosed somewhere in the AAPA/Schepers combination) and even if a *prima facie* case had been set out, it is completely rebutted by the clear AAPA teaching away from the claimed invention. Accordingly, any further rejection of the claims under 35 USC §103 is respectfully traversed.

Applicants note that the reference to the Schepers patent (U.S. Patent 5,712,996) is not identified anywhere in a PTO Form 1449 or PTO Form 892. Clarification of the status of this patent citation is respectfully requested.

Having responded to all objections and rejections set forth in the outstanding Official Action, it is submitted that claims 1-4, 6-17, 19-29, 31-37 and 39-42 are in condition for allowance and notice to that effect is respectfully solicited. In the event the Examiner is of the opinion that a brief telephone or personal interview will facilitate allowance of one or more of the above claims, the Examiner is respectfully requested to contact Applicants' undersigned representative.

Respectfully submitted,

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Attachment: Replacement Sheets of Drawings